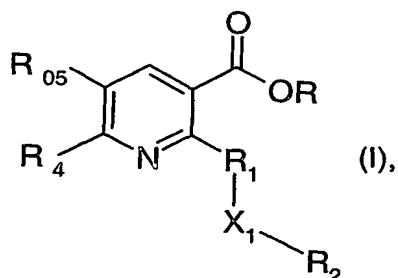


What is claimed is:

1. A process for the preparation of a compound of formula I



wherein

R is C₁-C₆alkyl;

R₀₅ is Hydrogen, C₁-C₃alkyl, C₁-C₃haloalkyl or C₁-C₃alkyl-C₁-C₃alkoxy;

R₁ is a C₁-C₆alkylene, C₃-C₆alkenylene or C₃-C₆alkynylene chain which may be substituted one or more times by halogen and/or by R₅, the unsaturated bonds of the chain not being attached directly to the substituent X₁;

R₄ is C₁-C₄haloalkyl;

X₁ is oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R₆)-O-, -O-NR₁₇-, thio, sulfinyl, sulfonyl, -SO₂NR₇-, -NR₁₈SO₂-, -N(SO₂R_{18a})-, -N(R_{18b})C(O)- or -NR₈-;

R_{18a} is C₁-C₆alkyl;

R₂ is hydrogen or C₁-C₆alkyl, or is a C₁-C₈alkyl, C₃-C₆alkenyl or C₃-C₆alkynyl group which may be substituted one or more times by substituents selected from halogen, hydroxy, amino, formyl, nitro, cyano, mercapto, carbamoyl, C₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, C₂-C₆alkenyl, C₂-C₆haloalkenyl, C₂-C₆alkynyl, C₂-C₆haloalkynyl, C₃-C₆cycloalkyl, halo-substituted C₃-C₆cycloalkyl, C₃-C₆alkenyloxy, C₃-C₆alkynyloxy, C₁-C₆haloalkoxy, C₃-C₆haloalkenyloxy, cyano-C₁-C₆alkoxy, C₁-C₆alkoxy-C₁-C₆alkoxy, C₁-C₆alkoxy-C₁-C₆alkoxy-C₁-C₆alkoxy, C₁-C₆alkylthio-C₁-C₆alkoxy, C₁-C₆alkylsulfinyl-C₁-C₆alkoxy, C₁-C₆alkylsulfonyl-C₁-C₆alkoxy, C₁-C₆alkoxycarbonyl-C₁-C₆alkoxy, C₁-C₆alkylcarbonyl, C₁-C₆alkylthio, C₁-C₆alkylsulfinyl, C₁-C₆alkylsulfonyl, C₁-C₆haloalkylthio, C₁-C₆haloalkylsulfinyl, C₁-C₆haloalkylsulfonyl, oxiranyl (which may in turn be substituted by C₁-C₆alkyl), (3-oxetanyl)oxy (which may in turn be substituted by C₁-C₆alkyl), benzyloxy, benzylthio, benzylsulfinyl, benzylsulfonyl, C₁-C₆alkylamino, di(C₁-C₆alkyl)amino, R₉S(O)₂O-, R₁₀N(R₁₁)SO₂-, rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl and phenylsulfonyl;

it being possible for the phenyl- or benzyl-containing groups to be in turn substituted by one or more C₁-C₆alkyl, C₁-C₆haloalkyl, C₁-C₆alkoxy, C₁-C₆haloalkoxy, halogen, cyano, hydroxy or nitro groups, or

R₂ is phenyl which may be substituted one or more times by C₁-C₆alkyl, C₁-C₆haloalkyl, C₁-C₆alkoxy, C₁-C₆haloalkoxy, halogen, cyano, hydroxy or by nitro; or

R₂ is C₃-C₆cycloalkyl, C₁-C₆alkoxy- or C₁-C₆alkyl-substituted C₃-C₆cycloalkyl, 3-oxetanyl or C₁-C₆alkyl-substituted 3-oxetanyl; or

R₂ is a three- to ten-membered, monocyclic or fused bicyclic, ring system which may be aromatic, partially saturated or fully saturated and may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen, sulfur, and/or may contain the group -C(=O)-, -C(=S)-, -C(=NR₁₉)-, -(N=O)-, -S(=O)- or -SO₂-, the ring system being attached to the substituent X₁ either directly or by way of a C₁-C₄alkylene, C₂-C₄alkenylene, C₂-C₄alkynylene, -N(R₁₂)-C₁-C₄alkylene, -O-C₁-C₄alkylene, -S-C₁-C₄alkylene, -SO-C₁-C₄alkylene or -SO₂-C₁-C₄alkylene group and each ring system containing no more than 2 oxygen atoms and no more than two sulfur atoms, and it being possible for each ring system itself to be substituted one or more times by C₁-C₆alkyl, C₁-C₆haloalkyl, C₂-C₆alkenyl, C₂-C₆haloalkenyl, C₂-C₆alkynyl, C₂-C₆haloalkynyl, C₁-C₆alkoxy, C₁-C₆haloalkoxy, C₃-C₆alkenyloxy, C₃-C₆alkynyloxy, mercapto, amino, hydroxy, C₁-C₆alkylthio, C₁-C₆haloalkylthio, C₃-C₆alkenylthio, C₃-C₆haloalkenylthio, C₃-C₆alkynylthio, C₁-C₃alkoxy-C₁-C₃alkylthio, C₁-C₄alkylcarbonyl-C₁-C₃alkylthio, C₁-C₄alkoxycarbonyl-C₁-C₃alkylthio, cyano-C₁-C₃alkylthio, C₁-C₆alkylsulfinyl, C₁-C₆haloalkylsulfinyl, C₁-C₆alkylsulfonyl, C₁-C₆haloalkylsulfonyl, amino-sulfonyl, C₁-C₂alkylaminosulfonyl, N,N-di(C₁-C₂alkyl)aminosulfonyl, di(C₁-C₄alkyl)amino, halogen, cyano, nitro or by phenyl, it being possible for the phenyl group to be in turn substituted by hydroxy, C₁-C₆alkylthio, C₁-C₆haloalkylthio, C₃-C₆alkenylthio, C₃-C₆haloalkenylthio, C₃-C₆alkynylthio, C₁-C₃alkoxy-C₁-C₃alkylthio, C₁-C₄alkylcarbonyl-C₁-C₃alkylthio, C₁-C₄alkoxycarbonyl-C₁-C₃alkylthio, cyano-C₁-C₃alkylthio, C₁-C₆alkylsulfinyl, C₁-C₆haloalkylsulfinyl, C₁-C₆alkylsulfonyl, C₁-C₆haloalkylsulfonyl, aminosulfonyl, C₁-C₂alkylaminosulfonyl, N,N-di(C₁-C₂alkyl)aminosulfonyl, di(C₁-C₄alkyl)amino, halogen, cyano or by nitro, and the substituents on nitrogen in a heterocyclic ring being other than halogen; R₅ is hydroxy, C₁-C₆alkoxy, C₃-C₆cycloalkyloxy, C₁-C₆alkoxy-C₁-C₆alkoxy, C₁-C₆alkoxy-C₁-C₆alkoxy-C₁-C₆alkoxy or C₁-C₂alkylsulfonyloxy; R₆, R₇, R₈, R₉, R₁₀, R₁₁, R₁₂, R₁₇, R₁₈ and R_{18b} are each independently of the others hydrogen, C₁-C₆alkyl, C₁-C₆haloalkyl, C₁-C₆alkoxycarbonyl, C₁-C₆alkylcarbonyl, C₁-C₆alkoxy-C₁-C₆alkyl, C₁-C₆alkoxy-C₁-C₆alkyl substituted by C₁-C₆alkoxy, benzyl, or phenyl, it

being possible for phenyl and benzyl to be in turn substituted one or more times by C_1 - C_6 alkyl, C_1 - C_6 haloalkyl, C_1 - C_6 alkoxy, C_1 - C_6 haloalkoxy, halogen, cyano, hydroxy or by nitro; R_8 not being hydrogen when R_9 is hydrogen, C_1 - C_6 alkoxycarbonyl or C_1 - C_6 alkylcarbonyl;

or the group $-R_1-X_1-R_2$ together is C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 haloalkenyl, C_2 - C_6 alkynyl, C_2 - C_6 haloalkynyl, C_3 - C_6 cycloalkyl, C_1 - C_6 alkoxy, C_1 - C_6 haloalkoxy, C_1 - C_6 alkylthio, C_1 - C_6 alkylsulfinyl, C_1 - C_6 alkylsulfonyl, C_1 - C_6 haloalkyl, C_1 - C_6 haloalkylthio, C_1 - C_6 haloalkylsulfinyl, C_1 - C_6 haloalkylsulfonyl, C_1 - C_6 alkoxycarbonyl, C_1 - C_6 alkylcarbonyl, C_1 - C_6 alkylamino, di(C_1 - C_6 alkyl)amino, C_1 - C_6 alkylaminosulfonyl, di(C_1 - C_6 alkyl)aminosulfonyl, $-NH-S-R_{13}$, $-N-(C_1-C_4alkylthio)-R_{13}$, $-NH-SO-R_{14}$, $-N-(C_1-C_4alkylsulfonyl)-R_{14}$, $-NH-SO_2-R_{15}$, $-N-(C_1-C_4alkylsulfonyl)-R_{15}$, nitro, cyano, halogen, hydroxy, amino, formyl, rhodano- C_1 - C_6 alkyl, cyano- C_1 - C_6 alkyl, oxiranyl, C_3 - C_6 alkenyloxy, C_3 - C_6 alkynyloxy, C_1 - C_6 alkoxy- C_1 - C_6 alkoxy, cyano- C_1 - C_6 alkenyloxy, C_1 - C_6 alkoxycarbonyloxy- C_1 - C_6 alkoxy, C_3 - C_6 alkynyloxy, cyano- C_1 - C_6 alkoxy, C_1 - C_6 alkoxycarbonyl- C_1 - C_6 alkoxy, C_1 - C_6 alkylthio- C_1 - C_6 alkoxy, C_1 - C_6 alkoxycarbonyl- C_1 - C_6 alkylthio, C_1 - C_6 alkoxycarbonyl- C_1 - C_6 alkylsulfinyl, C_1 - C_6 alkoxycarbonyl- C_1 - C_6 alkylsulfonyl, C_1 - C_6 alkylsulfonyloxy, C_1 - C_6 haloalkylsulfonyloxy, phenyl, benzyl, phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl, benzylthio, benzylsulfinyl or benzylsulfonyl, it being possible for the phenyl groups to be substituted one or more times by halogen, methyl, ethyl, trifluoromethyl, methoxy or by nitro; or the group $-R_1-X_1-R_2$ together is a three- to ten-membered, monocyclic or fused bicyclic, ring system, which may be aromatic, partially saturated or saturated and which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur and/or may contain one or two groups selected from $-C(=O)-$, $-C(=S)-$, $-C(=NR_{20})-$, $-(N=O)-$, $-S(=O)-$ and $-SO_2-$, the ring system either being attached to the pyridine ring directly via a carbon atom or being attached to the pyridine ring via a carbon atom or via a nitrogen atom by way of a C_1 - C_4 alkylene, C_2 - C_4 alkenyl or C_2 - C_4 alkynyl chain, and it being possible for each ring system to contain no more than 2 oxygen atoms and no more than two sulfur atoms, and it being possible for the ring system itself to be substituted one, two or three times by substituents selected from C_1 - C_6 alkyl, C_1 - C_6 haloalkyl, C_3 - C_6 alkenyl, C_3 - C_6 haloalkenyl, C_3 - C_6 alkynyl, C_3 - C_6 haloalkynyl, C_3 - C_6 cycloalkyl, hydroxy, C_1 - C_6 alkoxy, C_1 - C_6 haloalkoxy, C_3 - C_6 alkenyloxy, C_3 - C_6 alkynyloxy, mercapto, C_1 - C_6 alkylthio, C_1 - C_6 haloalkylthio, C_3 - C_6 alkenylthio, C_3 - C_6 haloalkenylthio, C_3 - C_6 alkynylthio, C_1 - C_3 alkoxy- C_1 - C_3 alkylthio, C_1 - C_3 alkylcarbonyl- C_1 - C_3 alkylthio, C_1 - C_4 alkoxycarbonyl- C_1 - C_3 alkylthio, cyano- C_1 - C_3 alkylthio, C_1 - C_6 alkylsulfinyl, C_1 - C_6 haloalkylsulfinyl, C_1 - C_6 alkylsulfonyl, C_1 - C_6 haloalkylsulfonyl,

aminosulfonyl, C₁-C₂alkylaminosulfonyl, di(C₁-C₆alkyl)aminosulfonyl, C₁-C₃alkylene-R₁₆, amino, C₁-C₆alkylamino, C₁-C₆alkoxyamino, di(C₁-C₆alkyl)amino, (N-C₁-C₆alkyl)-C₁-C₆alkoxyamino, halogen, cyano, nitro, phenyl, benzyloxy and benzylthio, it being possible for phenyl, benzyloxy and benzylthio to be in turn substituted on the phenyl ring by C₁-C₃alkyl, C₁-C₃haloalkyl, C₁-C₃alkoxy, C₁-C₃haloalkoxy, halogen, cyano or by nitro, and substituents on a nitrogen atom in a heterocyclic ring being other than halogen;

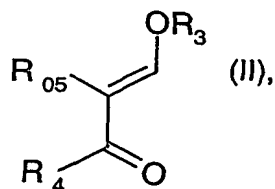
R₁₃ is N(H)-C₁-C₆alkyl, N(H)-C₁-C₆alkoxy, N-(C₁-C₆alkyl)-C₁-C₆alkyl, N-(C₁-C₆alkyl)-C₁-C₆alkoxy, C₁-C₆alkoxy, C₁-C₆haloalkoxy, C₁-C₆alkyl, C₁-C₆haloalkyl, C₃-C₆alkenyl, C₃-C₆haloalkenyl, C₃-C₆alkynyl, C₃-C₆haloalkynyl, C₃-C₆cycloalkyl or phenyl, it being possible for phenyl to be in turn substituted by C₁-C₃alkyl, C₁-C₃haloalkyl, C₁-C₃alkoxy, C₁-C₃haloalkoxy, halogen, cyano or by nitro;

R₁₄ is N(H)-C₁-C₆alkyl, N(H)-C₁-C₆alkoxy, N-(C₁-C₆alkyl)-C₁-C₆alkyl, N-(C₁-C₆alkyl)-C₁-C₆alkoxy, C₁-C₆alkoxy, C₁-C₆haloalkoxy, C₁-C₆alkyl, C₁-C₆haloalkyl, C₃-C₆alkenyl, C₃-C₆haloalkenyl, C₃-C₆alkynyl, C₃-C₆haloalkynyl, C₃-C₆cycloalkyl or phenyl, it being possible for phenyl to be in turn substituted by C₁-C₃alkyl, C₁-C₃haloalkyl, C₁-C₃alkoxy, C₁-C₃haloalkoxy, halogen, cyano or by nitro;

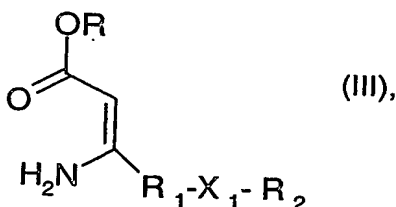
R₁₅ is N(H)-C₁-C₆alkyl, N(H)-C₁-C₆alkoxy, N-(C₁-C₆alkyl)-C₁-C₆alkyl, N-(C₁-C₆alkyl)-C₁-C₆alkoxy, C₁-C₆alkoxy, C₁-C₆haloalkoxy, C₁-C₆alkyl, C₁-C₆haloalkyl, C₃-C₆alkenyl, C₃-C₆haloalkenyl, C₃-C₆alkynyl, C₃-C₆haloalkynyl, C₃-C₆cycloalkyl or phenyl, it being possible for phenyl to be in turn substituted by C₁-C₃alkyl, C₁-C₃haloalkyl, C₁-C₃alkoxy, C₁-C₃haloalkoxy, halogen, cyano or by nitro;

R₁₆ is C₁-C₃alkoxy, C₂-C₄alkoxycarbonyl, C₁-C₃alkylthio, C₁-C₃alkylsulfinyl, C₁-C₃alkylsulfonyl or phenyl, it being possible for phenyl to be in turn substituted by C₁-C₃alkyl, C₁-C₃haloalkyl, C₁-C₃alkoxy, C₁-C₃haloalkoxy, halogen, cyano or by nitro; and

R₁₉ and R₂₀ are each independently of the other hydrogen, hydroxy, C₁-C₆alkyl, C₁-C₆haloalkyl, C₁-C₆alkoxy, cyano, C₁-C₆alkylcarbonyl, C₁-C₆alkoxycarbonyl or C₁-C₆alkylsulfonyl; which process comprises reacting a compound of formula II



wherein R_3 is C_1 - C_8 alkyl or C_3 - C_6 cycloalkyl and R_4 and R_{05} are as defined for formula I, with a compound of formula III



wherein R , R_1 , R_2 and X_1 are as defined for formula I, in an inert solvent in the presence of a proton source.

2. A process according to claim 1, wherein there is prepared a compound of formula I wherein

R_4 is halomethyl or haloethyl;

R_{05} is hydrogen;

X_1 is oxygen, $-O(CO)-$, $-(CO)O-$, $-O(CO)O-$, $-N(R_6)-O-$, $-O-NR_{17}-$, thio, sulfinyl, sulfonyl, $-SO_2NR_{17}-$, $-NR_{18}SO_2-$ or $-NR_8-$;

R_2 is hydrogen or C_1 - C_8 alkyl, or a C_1 - C_8 alkyl, C_3 - C_6 alkenyl or C_3 - C_6 alkynyl group which is substituted one or more times by halogen, hydroxy, amino, formyl, nitro, cyano, mercapto, carbamoyl, C_1 - C_6 alkoxy, C_1 - C_6 alkoxycarbonyl, C_2 - C_6 alkenyl, C_2 - C_6 haloalkenyl, C_2 - C_6 alkynyl, C_2 - C_6 haloalkynyl, C_3 - C_6 cycloalkyl, halo-substituted C_3 - C_6 cycloalkyl, or by C_3 - C_6 alkenyloxy, C_3 - C_6 alkynyloxy, C_1 - C_6 haloalkoxy, C_3 - C_6 haloalkenyloxy, cyano- C_1 - C_6 alkoxy, C_1 - C_6 alkoxy- C_1 - C_6 alkoxy, C_1 - C_6 alkoxy- C_1 - C_6 alkoxy- C_1 - C_6 alkoxy, C_1 - C_6 alkylthio- C_1 - C_6 alkoxy, C_1 - C_6 alkylsulfinyl- C_1 - C_6 alkoxy, C_1 - C_6 alkylsulfonyl- C_1 - C_6 alkoxy, C_1 - C_6 alkoxycarbonyl- C_1 - C_6 alkoxy, C_1 - C_6 alkoxycarbonyl, C_1 - C_6 alkylcarbonyl, C_1 - C_6 alkylthio, C_1 - C_6 alkylsulfinyl, C_1 - C_6 alkylsulfonyl, C_1 - C_6 haloalkylthio, C_1 - C_6 haloalkylsulfinyl, C_1 - C_6 haloalkylsulfonyl, oxiranyl (which may in turn be substituted by C_1 - C_6 alkyl), or by (3-oxetanyl)oxy (which may in turn be substituted by C_1 - C_6 alkyl), or by benzylthio, benzylsulfinyl, benzylsulfonyl, C_1 - C_6 alkylamino, di(C_1 - C_6 alkyl)amino, $R_9S(O)_2O-$, $R_{10}N(R_{11})SO_2-$, rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl or by phenylsulfonyl; it being possible for the phenyl- or benzyl-containing groups to be in turn substituted by one or more C_1 - C_6 alkyl, C_1 - C_6 haloalkyl, C_1 - C_6 alkoxy, C_1 - C_6 haloalkoxy, halogen, cyano, hydroxy or nitro groups, or

R_2 is phenyl which may be substituted one or more times by C_1 - C_6 alkyl, C_1 - C_6 haloalkyl, C_1 - C_6 alkoxy, C_1 - C_6 haloalkoxy, halogen, cyano, hydroxy or by nitro; or

R_2 is C_3 - C_6 cycloalkyl, C_1 - C_6 alkoxy- or C_1 - C_6 alkyl-substituted C_3 - C_6 cycloalkyl, 3-oxetanyl or C_1 - C_6 alkyl-substituted 3-oxetanyl;

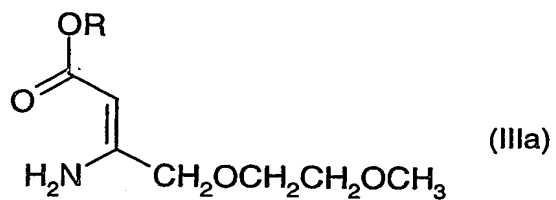
or R_2 is a five- to ten-membered, monocyclic or fused bicyclic, ring system which may be aromatic, partially saturated or fully saturated and may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen, sulfur, and/or may contain the group $-C(=O)-$, $-C(=S)-$, $-C(=NR_{19})-$, $-(N=O)-$, $-S(=O)-$ or $-SO_2-$, the ring system being attached to the substituent X_1 directly or by way of a C_1 - C_4 alkylene, C_2 - C_4 alkenyl- C_1 - C_4 alkylene, C_2 - C_4 alkynyl- C_1 - C_4 alkylene, $-N(R_{12})$ - C_1 - C_4 alkylene, $-SO$ - C_1 - C_4 alkylene or $-SO_2$ - C_1 - C_4 alkylene group and each ring system containing no more than 2 oxygen atoms and no more than two sulfur atoms, and it being possible for each ring system itself to be substituted one or more times by C_1 - C_6 alkyl, C_1 - C_6 haloalkyl, C_2 - C_6 alkenyl, C_2 - C_6 haloalkenyl, C_2 - C_6 alkynyl, C_2 - C_6 haloalkynyl, C_1 - C_6 alkoxy, C_1 - C_6 haloalkoxy, C_3 - C_6 alkenyloxy, C_3 - C_6 alkynyloxy, mercapto, amino, hydroxy, C_1 - C_6 alkylthio, C_1 - C_6 haloalkylthio, C_3 - C_6 alkenylthio, C_3 - C_6 haloalkenylthio, C_3 - C_6 alkynylthio, C_1 - C_3 alkoxy- C_1 - C_3 alkylthio, C_1 - C_4 alkylcarbonyl- C_1 - C_3 alkylthio, C_1 - C_4 alkoxycarbonyl- C_1 - C_3 alkylthio, cyano- C_1 - C_3 alkylthio, C_1 - C_6 alkylsulfinyl, C_1 - C_6 haloalkylsulfinyl, C_1 - C_6 alkylsulfonyl, C_1 - C_6 haloalkylsulfonyl, aminosulfonyl, C_1 - C_2 alkylaminosulfonyl, N,N -di(C_1 - C_2 alkyl)aminosulfonyl, di(C_1 - C_4 alkyl)amino, halogen, cyano, nitro or by phenyl, it being possible for the phenyl group to be in turn substituted by hydroxy, C_1 - C_6 alkylthio, C_1 - C_6 haloalkylthio, C_3 - C_6 alkenylthio, C_3 - C_6 haloalkenylthio, C_3 - C_6 alkynylthio, C_1 - C_3 alkoxy- C_1 - C_3 alkylthio, C_1 - C_4 alkylcarbonyl- C_1 - C_3 alkylthio, C_1 - C_4 alkoxycarbonyl- C_1 - C_3 alkylthio, cyano- C_1 - C_3 alkylthio, C_1 - C_6 alkylsulfinyl, C_1 - C_6 haloalkylsulfinyl, C_1 - C_6 alkylsulfonyl, C_1 - C_6 haloalkylsulfonyl, aminosulfonyl, C_1 - C_2 alkylaminosulfonyl, N,N -di(C_1 - C_2 alkyl)aminosulfonyl, di(C_1 - C_4 alkyl)amino, halogen, cyano or by nitro, and the substituents on nitrogen in a heterocyclic ring being other than halogen;

R_6 , R_7 , R_8 , R_9 , R_{10} , R_{11} , R_{12} , R_{17} and R_{18} are each independently of the others hydrogen, C_1 - C_6 alkyl, C_1 - C_6 haloalkyl, C_1 - C_6 alkoxycarbonyl, C_1 - C_6 alkylcarbonyl, C_1 - C_6 alkoxy- C_1 - C_6 alkyl, C_1 - C_6 alkoxy- C_1 - C_6 alkyl substituted by C_1 - C_6 alkoxy, benzyl, or phenyl, it being possible for phenyl and benzyl to be in turn substituted one or more times by C_1 - C_6 alkyl, C_1 - C_6 haloalkyl, C_1 - C_6 alkoxy, C_1 - C_6 haloalkoxy, halogen, cyano, hydroxy or by nitro; R_6 not being hydrogen when R_9 is hydrogen, C_1 - C_6 alkoxycarbonyl or C_1 - C_6 alkylcarbonyl;

or the group $-R_1-X_1-R_2$ together is C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 haloalkenyl, C_2 - C_6 alkynyl, C_2 - C_6 haloalkynyl, C_3 - C_6 cycloalkyl, C_1 - C_6 alkoxy, C_1 - C_6 haloalkoxy, C_1 - C_6 alkylthio, C_1 - C_6 alkylsulfinyl, C_1 - C_6 alkylsulfonyl, C_1 - C_6 haloalkyl, C_1 - C_6 haloalkylthio, C_1 - C_6 haloalkylsulfinyl, C_1 - C_6 haloalkylsulfonyl, C_1 - C_6 alkoxycarbonyl, C_1 - C_6 alkylcarbonyl, C_1 - C_6 alkylamino,

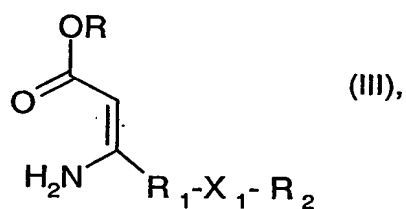
di(C₁-C₆alkyl)amino, C₁-C₆alkylaminosulfonyl, di(C₁-C₆alkyl)aminosulfonyl, -NH-S-R₁₃,
 -N₁-(C₁-C₄alkylthio)-R₁₃, -NH-SO-R₁₄, -N-(C₁-C₄alkylsulfonyl)-R₁₄, -NH-SO₂-R₁₅,
 -N-(C₁-C₄alkylsulfonyl)-R₁₅, nitro, cyano, halogen, hydroxy, amino, formyl, rhodano-
 C₁-C₆alkyl, cyano-C₁-C₆alkyl, oxiranyl, C₃-C₆alkenyloxy, C₃-C₆alkynyloxy, C₁-C₆alkoxy-
 C₁-C₆alkoxy, cyano-C₁-C₆alkenyloxy, C₁-C₆alkoxycarbonyloxy-C₁-C₆alkoxy, C₃-C₆alkynyl-
 oxy, cyano-C₁-C₆alkoxy, C₁-C₆alkoxycarbonyl-C₁-C₆alkoxy, C₁-C₆alkylthio-C₁-C₆alkoxy,
 alkoxycarbonyl-C₁-C₆alkylthio, alkoxycarbonyl-C₁-C₆alkylsulfinyl, alkoxycarbonyl-
 C₁-C₆alkylsulfonyl, C₁-C₆alkylsulfonyloxy, C₁-C₆haloalkylsulfonyloxy, phenyl, benzyl,
 phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl, benzylthio, benzylsulfinyl or
 benzylsulfonyl, it being possible for the phenyl groups to be substituted one or more times
 by halogen, methyl, ethyl, trifluoromethyl, methoxy or by nitro;
 or the group -R₁-X₁-R₂ together is a five- to ten-membered, monocyclic or fused bicyclic,
 ring system, which may be aromatic or partially saturated and which may contain from 1 to
 4 hetero atoms selected from nitrogen, oxygen and sulfur, the ring system either being
 directly attached to the pyridine ring or being attached to the pyridine ring by way of a
 C₁-C₄alkylene group, and it being possible for each ring system to contain no more than
 2 oxygen atoms and no more than two sulfur atoms, and/or to contain the group -C(=O)-,
 -C(=S)-, -C(=NR₂₀)-, -(N=O)-, -S(=O)- or -SO₂-;
 and the ring system itself may be substituted one, two or three times by C₁-C₆alkyl, C₁-C₆-
 haloalkyl, C₃-C₆alkenyl, C₃-C₆haloalkenyl, C₃-C₆alkynyl, C₃-C₆haloalkynyl, C₁-C₆alkoxy,
 C₁-C₆haloalkoxy, C₃-C₆alkenyloxy, C₃-C₆alkynyloxy, mercapto, C₁-C₆alkylthio, C₁-C₆-
 haloalkylthio, C₃-C₆alkenylthio, C₃-C₆haloalkenylthio, C₃-C₆alkynylthio, C₂-C₅alkoxyalkyl-
 thio, C₃-C₅acetylalkylthio, C₃-C₆alkoxycarbonylalkylthio, C₂-C₄cyanoalkylthio, C₁-C₆alkyl-
 sulfinyl, C₁-C₆haloalkylsulfinyl, C₁-C₆alkylsulfonyl, C₁-C₆haloalkylsulfonyl, aminosulfonyl,
 C₁-C₂alkylaminosulfonyl, C₂-C₄dialkylaminosulfonyl, C₁-C₃alkylene-R₁₆, N(H)-C₁-C₆alkyl,
 N(H)-C₁-C₆alkoxy, N-(C₁-C₆alkyl)-C₁-C₆alkyl, N-(C₁-C₆alkyl)-C₁-C₆alkoxy, halogen, cyano,
 nitro, phenyl and by benzylthio, it being possible for phenyl and benzylthio to be in turn
 substituted on the phenyl ring by C₁-C₃alkyl, C₁-C₃haloalkyl, C₁-C₃alkoxy, C₁-C₃haloalkoxy,
 halogen, cyano or by nitro, and substituents on nitrogen in a heterocyclic ring being other
 than halogen; and
 R₁₉ and R₂₀ are each independently of the other hydrogen, hydroxy, C₁-C₆alkyl, C₁-C₆-
 haloalkyl, C₁-C₆alkoxy, C₁-C₆alkylcarbonyl, C₁-C₆alkoxycarbonyl or C₁-C₆alkylsulfonyl.

3. A compound of formula IIIa



wherein R is as defined for formula I in claim 1.

4. Use of a compound of formula III



wherein R, R₁, R₂ and X₁ are as defined for formula I in claim 1, in the preparation of a compound of formula I according to claim 1.